PXI and AXIe Modular Instrumentation

M9018A PXIe Chassis
M9502A AXIe Chassis
M9505A AXIe Chassis

Tested Computer List
Technical Overview

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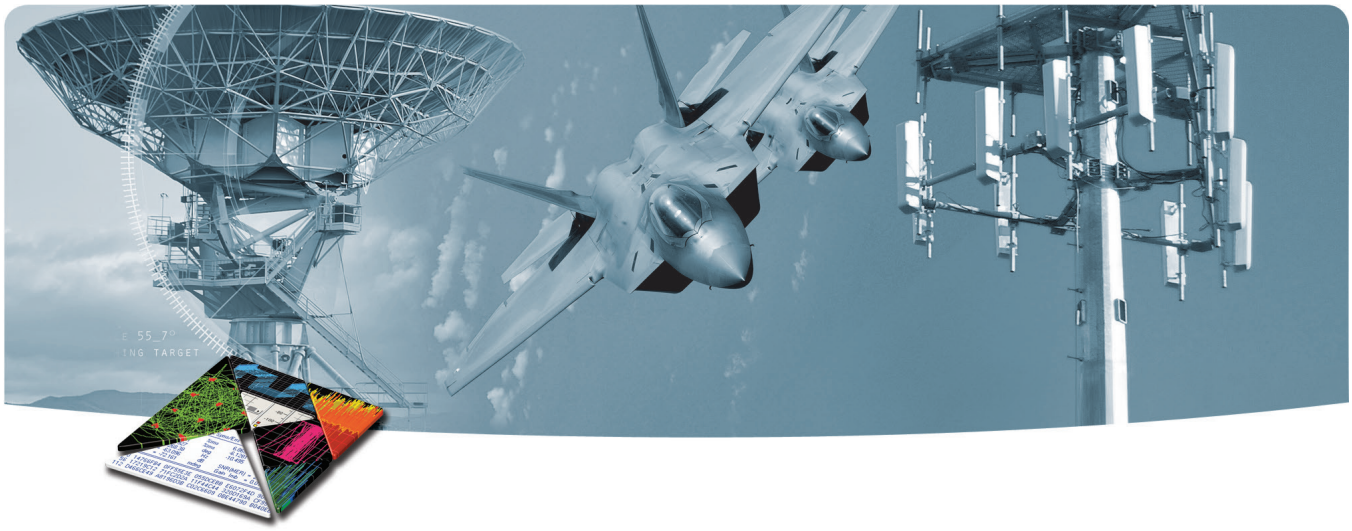

OVERVIEW

This personal computer and controller technical note has been prepared to provide the system designer with a list of tested computers that are compatible with Agilent Technologies PXI and AXIe chassis. Both AXIe and PXIe chassis are compatible with each computer unless otherwise noted. The testing in this guide covers both the PCIe link and enumeration of the chassis. Compatibility can be impacted by many factors including computer BIOS and signal path within the computer and cable.

Figure 1. M9045B PCIe ExpressCard Adapter and Y1200B PCIe Cable.

Agilent Technologies modular chassis tested:

- Agilent M9018A PXIe Chassis
- Agilent M9502A AXIe Chassis
- Agilent M9505A AXIe Chassis

Personal computing devices tested:

- Laptop PC
- Desktop PC
- Tested rack mount PCs
- Tested PXIe embedded PCs

Figure 2. M9502A AXIe 2 slot chassis.

TESTING CONFIGURATIONS

Testing configurations	
Agilent M9018A PXIe chassis	• Tested using cabled PCI Express® link with the M9021A PCIe® cable interface and PXIe embedded controllers. • Testing was performed with only a graphics card in its standard slot and Agilent-recommended PCIe host cable card installed [1] • Laptop testing utilized the M9045B ExpressCard and Y1200B PCIe cable • Desktop/rack-mounted PC testing utilized the M9048A PCIe interface and Y1202A PCIe cable • Tested with Microsoft Windows 7 (32/64 bits)
Agilent M9502A AXIe chassis	• Tested using: cabled PCI Express link, • Testing was performed with only a graphics card in its standard slot and Agilent-recommended PCIe host cable card installed [1]
Agilent M9505A AXIe chassis	• Laptop testing utilized the M9045B ExpressCard and Y1200B PCIe cable • Desktop/rack-mounted PC testing utilized the M9048A PCIe interface and Y1202A PCIe cable • Tested with Microsoft Windows 7 (32/64 bits)

1. Applies to desktop and rackmount computers only. In some cases, the graphics card must also be removed (see computer comments)

Figure 3. M9505A AXIe chassis with M9536A embedded controller

Laptop personal computers [2]					
Manufacturer	Model	BIOS	PCIe Link	Number of chassis [3]	Comments
Dell Precision	M6700	A08	x1 Gen 1	1	AXIe only in Gen 1 mode
Hewlett Packard	ZBook 15	01.07	x1 Gen 1	1	Select Gen 1 setting for ExpressCard
Hewlett Packard	ZBook 17	01.04	x1 Gen 1	1	Select Gen 1 setting for ExpressCard
Note: The following models are supported, but have been discontinued by the manufacturer (they may still be available though distribution channels).					
Dell	Precision M4600	A.08	x1 Gen 1	1	
Dell	Precision M6600	A.07	x1 Gen 1	1	
Hewlett Packard	Elite Book 8460P	68SCF Ver F.22	x1 Gen 1	1	Select Gen 1 BIOS setting for ExpressCard
Hewlett Packard	Elite Book 8470P	68ICF Ver F.31	x1 Gen 1	1	Select Gen 1 BIOS setting for ExpressCard
Hewlett Packard	Elite Book 8540P	68CVD Ver F.0A	x1 Gen 1	1	
Hewlett Packard	Elite Book 8560P	68SCF Ver F.08	x1 Gen 1	1	Select Gen 1 BIOS setting for ExpressCard
Hewlett Packard	Elite Book 8560W	68SVD Ver. F.26	x1 Gen 1	1	Early models had an ExpressCard mechanical compatbility issue
Hewlitt Packard	Elite Book 8570P	68ICF Ver F.31	x1 Gen 1	1	Select Gen 1 BIOS setting for ExpressCard
Hewlett Packard	Elite Book 8570W	68IAV Ver F.31	x1 Gen 1	1	Select Gen 1 BIOS setting for ExpressCard
Lenovo	ThinkPad X220	8DET58WW (1.28)	x1 Gen 1	1	Select Gen 1 BIOS setting for ExpressCard
Lenovo	ThinkPad T420	83ET63WW (1.33)	x1 Gen 1	1	Select Gen 1 BIOS setting for ExpressCard

2. Laptops require the use of ExpressCard® x1 interface cards and therefore will exhibit lower performance than desktop links; however, the advantage is a thinner cable and added portability.

3. Number of chassis which are supported when connected to the computer.

Desktop personal computers					
Manufacturer	Model	BIOS	PCIe slots [1]	Number of chassis [2]	Comments
Acer	Aspire M1	P01-A1	One x16 Gen 2	1	
Acer	Aspire M3970	P03-A1	One x16 Gen 2	1	Use GPU slot (remove video card and use onboard VGA)
Dell	Optiplex 3010	A11	One x16 Gen 2	1	
Dell	Optiplex 9010	A13	One x16 Gen 2 One x16 (x4) Gen 2	1	Use x16 slot
Dell	T3610	A.06	Two x16 Gen 3 One x16 (x8) Gen 3	2	May need to move GPU. For multiple chassis, set "Bus Number" field in BIOS to 256
Dell	T5610	A.03	Two x16 Gen 3 One x16 (x8) Gen 3	2	May need to move GPU. For multiple chassis, set "Bus Number" field in BIOS to 256
Dell	T7610	A.03	Two/four x16 Gen 3	2	May need to move GPU. For multiple chassis, set "Bus Number" field in BIOS to 256. Second CPU required for fourth PCIe slot
Hewlett Packard	Elite 8300	K01 V.02.83	One x16 Gen 2 One x16 (x4) Gen 2	2	
Hewlett Packard	Z420	3.65 Rev A	Two x16 and One x8 Gen 3	2	Only two slots supported the third can be used for graphics
Hewlett Packard	Z620	3.65 Rev A	Two x16 and One x8 Gen 3	2	Only two slots supported the third can be used for graphics
Hewlett Packard	Z820	3.65 Rev A	Two/three x16 Gen 3 One x16 (x8) Gen 3	3	Second CPU required for third x16 and x16 (x8) slots.

1. *Tested PCIe slots in the PC. There may be additional slots in the PC which are not tested/supported. First number is mechanical connection, number in parenthesis is electrical connection. For example, x8 (x4) is a x8 slot wired as a x4. PCIe slots without a second number are the same mechanical/electrical*
2. *Number of chassis which are supported when connected to the computer. Available slots may depend on graphics used. More than two chassis requires a 64-bit OS. For more information see: www.agilent.com/find/pxie-multichassis.*

Desktop personal computers (cont'd)					
Manufacturer	Model	BIOS	PCIe slots [1]	Number of chassis [2]	Comments
The following models are supported, but have been discontinued by the manufacturer (may be available though distribution channels).					
Dell	T3600	A09	Two x 16 Gen 3	4	Only one slot (M9048A) supported. Move PERC RAID card to Gen 3 x16 (x4) to install M9048A. For multiple chassis, set "Bus Number" field in the BIOS to 256.
Dell	T5600	A09	Two x 16 Gen3	2	Move PERC RAID card to Gen 3 x16 (x4) to install M9048A. Move GPU to Gen 2 x16 (x4) slot if second M9048A is required. For multiple chassis, set "Bus Number" field in BIOS to 256.
Dell	T7600	A07	Two/Four x16 Gen 3	4	More than two PCIe® slots requires second CPU. May have to move RAID and GPU cards to other slots. For multiple chassis, set "Bus Number" field in BIOS to 256.
Dell Precision	Optiplex 390	A08	One x16 Gen 2	1	Use GPU slot (remove video card and use onboard VGA)
Hewlett Packard	ProLiant M11067	J01	One x16 Gen 2	1	
Hewlett Packard	Compaq 8200	01 v.02.09	One x16 Gen 2	1	
Hewlett Packard	ML150G6 Server	O21	One x16 Gen 2	1	
Hewlett Packard	Z400	3.54 Rev A	Two x16 Gen 2	1	Only one slot supported. The second can be used for graphics
Lenovo	ThinkStation D20	61KT48AUS	Two x16 Gen 2	1	Only one slot supported. The second can be used for graphics
Lenovo	ThinkStation S20	60KT44US	Two x16 Gen 2	1	Only one slot supported. The second can be used for graphics

1. *Tested PCIe slots in the PC. There may be additional slots in the PC which are not tested/supported. First number is mechanical connection, number in parenthesis is electrical connection. For example, x8 (x4) is a x8 slot wired as a x4. PCIe slots without a second number are the same mechanical/electrical.*
2. *Number of chassis which are supported when connected to the computer. Available slots may depend on graphics used. More than two chassis requires a 64-bit OS. For more information see: www.agilent.com/find/pxie-multichassis.*

Rackmount personal computers					
Manufacturer	Model	BIOS	PCIe Slots [1]	Number of chassis [2]	Comments
Advantech	PN: C-AGI1-PCE7127-V1	Custom BIOS supplied with computer	Two x8 Gen 3	4	1U Chassis, Win7 64Bit 3.5GHz Xeon quad core, 16GB, RAM, 256GB SSD
Advantech	PN: C-AGI1-PCE7127-V2	Custom BIOS supplied with computer	Two x8 Gen 3	4	4U Chassis, Win7 64Bit 3.5 GHz Xeon quad core, 16GB, RAM, 256GB SSD
Advantech	PN: C-AGI1-AIMB781-V1	Custom BIOS supplied with computer	One x16 Gen 3	2	4U Chassis, Win7 64Bit 3.4GHz i7 quad core, 16GB, RAM, 256GB SSD
Dell	R7610	A.03	Up to three x16 Gen 3 and one x16 (x8) Gen 3	2	Number of slots depends on CPU/riser option. For multiple chassis, set "Bus Number" field in BIOS 256
SuperLogic	SL-4U-Q67SW-WB	SWQ6710H.86A.0060. 2011.1220.1805	One x16 Gen2	1	
Kontron	KISS IPC 760	08.00.15	One x16 Gen2	1	
Note: The following models are supported, but have been discontinued by the manufacturer (they may still be available though distribution channels).					
Dell	R5500	I01	Up to two x16 (x8) and three x16 graphics Gen2	4	Check ftp://ftp.agilent.com/pub/mpusup/BIOS for latest information including supported versions

1. *Tested PCIe slots in the PC. There may be additional slots in the PC which are not tested/supported. First number is mechanical connection, number in parenthesis is electrical connection. For example, x8 (x4) is a x8 slot wired as a x4. PCIe slots without a second number are the same mechanical/electrical.*
2. *Number of chassis which are supported when connected to the computer. Available slots may depend on graphics used. More than two chassis requires a 64-bit OS. For more information see: www.agilent.com/find/pxie-multichassis.*

PXIe embedded personal computers					
Manufacturer	Model	BIOS	System Slot PCIe Links	Number of chassis [1]	Comments
Agilent	M9036A	AG20 or AG20-M	4x4 Gen 2 and 2x8 Gen 2	4	AG20-M required for more than 2 chassis
Agilent	M9037A	AG07	4x4 or 2x8 Gen 2 x8 Gen 2 (front panel)	4	No restrictions
National Instruments	PXIe-8108	4.6.3	4x1 Gen 1	1	No restrictions
National Instruments	PXIe-8133	4.6.3	4x4 Gen 1	1	No restrictions
National Instruments	PXIe-8135	1.0.0f4	4x4 or 2x8 Gen 2	1	No restrictions
Note: The following models are supported, but have been discontinued by the manufacturer (they may still be available though distribution channels).					
National Instruments	PXIe-8101	4.6.3	4x1 Gen 1	1	No restrictions
National Instruments	PXIe-8105	1.3.3	Four link: 1x1 and 3x4 Gen 1	1	No restrictions

1. *Number of chassis which are supported when connected to the computer. More than two chassis requires a 64-bit OS. For more information see: www.agilent.com/find/pxie-multichassis.*

Figure 4. Agilent M9037A PXIe Embedded Controller

AXIe embedded personal computers				
Manufacturer	Model	BIOS	System Slot PCIe Links	Comments
Agilent	M9536A	AG10	AXIe PCIe Link x4 Gen 2	AXIe slot one only

Figure 5. Agilent M9536A AXIe Embedded Controller.

The modular tangram

The four-sided geometric symbol that appears in this document is called a tangram. The goal of this seven-piece puzzle is to create identifiable shapes—from simple to complex. As with a tangram, the possibilities may seem infinite as you begin to create a new test system. With a set of clearly defined elements—hardware, software—Agilent can help you create the system you need, from simple to complex.

Challenge the Boundaries of Test

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